



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/544,613	04/06/2000	Jean-Claude Jammet	ATOCH-172	9063

23599 7590 11/20/2003

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.  
2200 CLARENDON BLVD.  
SUITE 1400  
ARLINGTON, VA 22201

EXAMINER
----------

RHEE, JANE J

ART UNIT	PAPER NUMBER
----------	--------------

1772

DATE MAILED: 11/20/2003

22

Please find below and/or attached an Office communication concerning this application or proceeding.

CH022

<b>Office Action Summary</b>	Application No. 09/544,613	Applicant(s) JAMMET ET AL.	
	Examiner Jane J Rhee	Art Unit 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-19 and 21-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-19 and 21-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/22/03 has been entered.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 10-12,14,15,19,21-24,27,29 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al. (6545091).

Lee et al. discloses a coextrusion binder comprising 5-30 parts of polymer (A) (col. 3 line 47) comprising a blend of polyethylene (A1) of relative density between 0.910 and 0.940 (table 1 example 18) and of a polymer (A2) selected from the very low density polyethylene having a density of 0.860 to 0.880 and metallocene polyethylenes (table 1 example 1), wherein both (A1) and (A2) are grafted with an unsaturated carboxylic acid or with a functional derivative of an unsaturated carboxylic acid (col. 7 line 6), 65-90 parts of ungrafted polyethylene (B) of relative density between 0.910 and

0.930 (col. 6 lines 36-38, col. 4 line 20), the blend of (A) and (B) having a relative density of between 0.910 and 0.930 (col. 8 lines 25-26), a content of grafted unsaturated carboxylic acid between 30 and 10,000 ppm (col. 7 lines 45-48) and MFI between 0.1 and 3g/10min (col. 8 lines 7-10). Lee et al. discloses that the binder has a relative density of between 0.915 and 0.920 (col.8 line 30). Lee discloses that the comonomer of (A1), before grafting is the same as that of (B) (col. 8 lines 1-6 and col. 11 under Codes, LL1, LL2, VL1). Lee et al. discloses a multilayer structure comprising a layer comprising the binder and directly attached to the latter a layer (E) which is a layer of nitrogen containing or oxygen containing polar resin or metal layer (col. 10 lines 20-26). Lee et al. discloses that layer (E) is directly attached on the binder side (col. 9 line 22). Lee et al. discloses that layer (E) is a layer of oxygen containing polar resin which is a polyamide, an aliphatic polyketone, a saponified ethylene-vinyl acetate copolymer or a polyester resin (col. 10 lines 20-25). Lee et al. discloses that the functional derivative of an unsaturated carboxylic acid is an anhydride, ester, amide, imide or metal salt of an unsaturated carboxylic acid (col. 7 lines 6-10). Lee et al. discloses that the functional derivative of an unsaturated carboxylic acid is maleic anhydride (col. 7 line 11-12). Lee et al. discloses that (A2) is a very low density polyethylene having a relative density selected in a manner whereby the blend of (A) and (B) have a relative density of 0.910 to 0.930 or 0.915 to 0.920 (col. 8 line 26).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1772

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 13,16-18,25,26,28,30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. in view of Nagano (0035392).

Lee et al. discloses the coextrusion binder described above. Lee et al. teaches a structure comprising an HDPE layer, first layer of the binder and a layer of EVOH (col. 14 lines 3-5). Lee et al. fail to disclose that (A1) comprises at least 75 mol% of ethylene in the polyethylene and has an  $MFI^2/[\eta]^{-8.77}$  ratio greater than 15 in absolute value, (A2) comprises at least 50mol% of ethylene in the elastomer, very low density polyethylene or metallocene polyethylene, (A2) has an  $MFI^2/[\eta]^{-8.77}$  ratio greater than 15 in absolute value, (A) has an ethylene content not less than 70mol%, the  $MFI_{10}/MFI_2$  ratio is between 5 and 20. Lee et al. fail to disclose a structure comprising an HDPE layer, first layer of binder, a layer of EVOH, a second layer of the binder, and an HDPE layer. Lee et al. fail to disclose a rigid hollow body and a gasoline tank. Lee et al. fail to disclose that the functional derivative of an unsaturated carboxylic acid is an anhydride of a dicarboxylic acid, or a  $C_1$ - $C_8$  alkyl ester or a glycidyl ester of an unsaturated carboxylic acid.

Nagano teaches 1-100% by weight of graft modified ethylene resin derived from an ethylene polymer which contains 0 to 5 mole% of at least one alpha-olefin having 3-30 carbon atoms as a comonomer and has a  $MI_2/[\eta]^{-8.77}$  ratio in absolute value of not less than 15 and a density of 0.88 to 0.98g/cm<sup>3</sup> for the purpose of providing a greatly improved impact strength characteristics such as low temperature impact strength and

Art Unit: 1772

falling impact strength and other excellent properties (page 3 lines 13-16). Nagano teaches structure comprising an HDPE layer, first layer of binder, a layer of EVOH, a second layer of the binder, and an HDPE layer (page 14 lines 31-33) for the purpose of being used in the form of film, sheets, boards, pipes, hollow container, etc. (page 15 lines 35-37). Nagano teaches a rigid hollow body and a gasoline tank for the purpose of taking advantage of the high rigidity mechanical strength, heat stability, gas barrier property, and steam barrier property of the constituent layers (page 16 lines 5-12). Nagano teaches that the functional derivative of an unsaturated carboxylic acid is an anhydride of a dicarboxylic acid, or a C<sub>1</sub>-C<sub>8</sub> alkyl ester or a glycidyl ester of an unsaturated carboxylic acid (page 5 lines 17-35) for the purpose of increasing adhesive strength in a multilayer structure (page 1 lines 30-33).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide Lee et al. with 1-100% by weight of graft modified ethylene resin derived from an ethylene polymer which contains 0 to 5 mole% of at least one alpha-olefin having 3-30 carbon atoms as a comonomer and has a  $Ml_2/[\eta]^{-8.77}$  ratio in absolute value of not less than 15 and a density of 0.88 to 0.98g/cm<sup>3</sup> in order to provide a greatly improved impact strength characteristics such as low temperature impact strength and falling impact strength and other excellent properties (page 3 lines 13-16) as taught by Nagano.

Also, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide Lee et al. with a structure comprising an HDPE layer, first layer of binder, a layer of EVOH, a second layer of the binder, and an

HDPE layer in order to be used in the form of film, sheets, boards, pipes, hollow container, etc. (page 15 lines 35-37) as taught by Nagano.

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide Lee et al. with a rigid hollow body and a gasoline tank in order to take advantage of the high rigidity mechanical strength, heat stability, gas barrier property, and steam barrier property of the constituent layers (page 16 lines 5-12) as taught by Nagano.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide Lee et al. with the functional derivative of an unsaturated carboxylic acid is an anhydride of a dicarboxylic acid, or a C<sub>1</sub>-C<sub>8</sub> alkyl ester or a glycidyl ester of an unsaturated carboxylic acid (page 5 lines 17-35) for the purpose of increasing adhesive strength in a multilayer structure (page 1 lines 30-33) as taught by Nagano.

### ***Response to Arguments***

Applicant's arguments with respect to claims 10-22 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

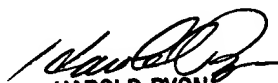
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jane J Rhee whose telephone number is 703-605-4959. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Jane Rhee  
November 17, 2003

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

11/17/03